

ASSESSING THE IMPACT OF SHAREHOLDER FOCUS AND PRODUCTIVITY PURSUIT ON SAFETY PERFORMANCE: A SYSTEMATIC LITERATURE REVIEW

Eunice Achina Agyemang¹, Innocent Musonda² and Sam Zulu³

^{1&2} *Centre of Applied Research and Innovation in the Built Environment (CARINBE), Faculty of Engineering and the Built Environment, University of Johannesburg, Johannesburg, South Africa*

³ *School of Built Environment, Engineering and Computing, Leeds Beckett University, Leeds, LS2 8AG, UK*

The simultaneous pursuit of shareholder value and productivity has emerged as a central focus within the construction industry. However, the potential consequences on safety performance in this sector remain inadequately explored. With construction companies increasingly prioritizing financial gains and operational efficiency, there is growing apprehension about the possible compromise of safety standards. To address this knowledge gap, the study employs a systematic literature review to examine the intricate dynamics between shareholder focus, productivity, and their impact on safety performance in the construction industry. A total of 27 academic publications from the Scopus database were identified and analysed. The findings highlight the necessity for a balanced approach that aligns financial objectives with the well-being of workers. Additionally, the study provides insights for industry stakeholders to enhance safety performance while maintaining a focus on shareholder value and productivity. The study guides policymakers, practitioners, and stakeholders in formulating balanced strategies and policies when addressing the complex interplay between financial objectives and safety in construction.

Keywords: shareholder focus; productivity; safety performance; shareholder theory; construction industry

INTRODUCTION

In contemporary business environments, the pursuit of shareholder value and productivity is central across industries (Fiordelisi and Molyneux 2010; Denes et al., 2015). This dual focus, emphasizing financial gains and operational efficiency, is pervasive in sectors like banking, manufacturing, and services. However, amidst this prevailing emphasis, the construction industry, a vital contributor to economic development has received comparatively less attention concerning the implications of this dual pursuit, particularly regarding safety performance. Operating in a complex environment with high-risk activities and significant resource utilization (Grennan et

¹ euniceachinaagyemang@gmail.com

al., 2014; Guzmán and Reverte 2008), the construction industry faces unique challenges. Shareholder value, often measured by efficiency, innovation, and profitability, is crucial for organizational success and investor appeal. Similarly, productivity is vital for competitiveness and profitability (Boubaker et al., 2021; Lumapow and Tumiwa 2017), enabling firms to deliver projects more efficiently. However, the relentless pursuit of productivity may compromise safety standards, posing risks to workers' well-being (Sahu and Solarin 2013; Xie et al., 2022). With construction companies prioritizing financial gains and operational efficiency, there is growing concern about safety standards.

Despite individual studies examining the relationship between productivity and safety performance (Boubaker et al., 2021; Bas et al., 2023), the impact of shareholder focuses on workplace safety (Cheng et al., 2023; Gong et al., 2021), there is a notable gap in literature concerning a holistic review that specifically examine the interconnectedness between shareholder focus, productivity pursuit and safety performance. Against this backdrop, this paper aims to systematically review the impact of shareholder focus and productivity pursuit on safety performance. Systematic reviews are recommended strongly to investigate existing knowledge to gain insights into the relationship between shareholder focus, productivity pursuit and safety performance.

Systematic reviews also differ from conventional reviews by using a research protocol that reduces the effects of probabilities and increases the validity and authority of the evidence identified in the review (Ampratwum et al., 2022). Thus, this study aims to assess the impact of shareholder focus and productivity pursuit on safety performance. Through a comprehensive examination of existing literature, this research seeks to understand the complex dynamics between financial objectives, operational efficiency, and safety outcomes within the construction industry, aiming to provide insights that inform policy formulation, strategic decision-making, and operational practices.

METHOD

In this study, a systematic literature review (SLR) methodology was employed to review the existing literature on the impact of shareholder focus and productivity pursuit on safety performance. The systematic process outlined by Tranfield et al., (2003) and Veginadu et al., (2022) was followed during the SLR. The literature search was carried out in three stages. Articles about shareholder focus and productivity were the main emphasis of the first stage. Articles about shareholder focus and safety performance were the focus of the second stage of the literature search. The third stage was focused on productivity and safety performance. Scopus database was used to search for relevant literature because it covers wide-ranging coverage of academic journals from different disciplines (Campedelli 2020).

Relevant publications were searched for using the title/abstract/keyword search bar on 19th February 2024. The first stage comprised keywords related to "shareholder AND orientation" OR "shareholder AND theory" OR "shareholder AND perspective" OR "shareholder AND focus" AND "productivity". The second stage comprised "shareholder AND orientation" OR "shareholder AND theory" OR "shareholder AND perspective" OR "shareholder AND focus" AND "safety AND performance" OR "safety" OR "health AND safety" OR "workplace AND safety". The third stage comprised "productivity" AND "safety AND performance" OR "health AND safety" OR "workplace AND safety" AND "construction AND industry".

Additionally, our inclusion criteria did not include any time constraints, as it would have limited our ability to analyse and draw conclusions from the existing literature. Due to limited publications in the research area, articles from Engineering, Business management and accounting, Economics, Econometric and Finance journals were considered, and the language and document type was limited to English and journal articles, respectively. This initial search process for the 1st, 2nd and 3rd stage resulted in 71, 58 and 80 papers respectively totally 209 papers, but after removing duplicates and unavailable articles, a total of 69 relevant articles remained. To further narrow down the list, there was a thorough reading of the titles, abstracts and full papers to confirm their relevance to the research themes (van Wee and Banister 2023). Ultimately, a final sample of 27 articles was used for the analysis.

Shareholder Focus and Productivity

In an extensive review spanning diverse industries and regions, a nuanced understanding emerges regarding the intricate relationship between shareholder focus and productivity. Table 1 summarises the main characteristics of the findings in this group. Fiordelisi and Molyneux (2010) study into the European banking sector found that changes in total factor productivity (TFP) greatly impact shareholder value creation with technological change being a pivotal component. Conversely, Denes et al., (2015) of shareholder activism in the United States underlines its potential to enhance firm earnings and governance features, with specific improvements observed in target firms' values. Grennan et al., (2014) exploration of corporate culture dynamics found out how increased shareholder governance may initially boost sales and profitability but can later decrease firm value by prioritizing result-orientation over customer-focus and collaboration.

Guzmán and Reverte (2008) study on the Spanish banking sector highlights the positive impact of efficiency and productivity changes on shareholder value, contrasting with Boubaker et al., (2021) findings in the French manufacturing sector, where excess control rights of dominant owners are shown to hinder firm productivity. Furthermore, Wanigasekara and Mendis (2021) research in Sri Lanka demonstrates a significant positive relationship between employee productivity and firm profitability, echoing Kumar and Charles (2009) findings in the Indian food industry, where productivity growth is closely linked to shareholders' wealth maximization. Additionally, studies by Sahu and Solarin (2013) in Indian manufacturing and Xie et al., (2022) in Chinese state-owned enterprises underscore the positive influence of foreign shareholding and further privatization on productivity and shareholder value. Bai and Li (2024) examination of stock liquidity in China emphasizes its complex relationship with firm productivity, while Lumapow and Tumiwa (2017) analysis of the Indonesian manufacturing sector reveals how dividend policy, firm size, and productivity collectively influence firm value. Finally, Lee (2011) investigation of the U.S. oil and gas industry highlights the interplay between sustainability performance, research intensity, and tangible business performance, indicating the multifaceted nature of shareholder focus across various strategic factors. Collectively, these studies illuminate the complex interplay between shareholder focus and productivity, offering valuable insights for strategic decision-making across industries and regions.

Shareholder Focus and Safety Performance

An examination into the relationship between shareholder focus and workplace safety reveals a complex interplay with far-reaching implications across various industries and regions. Summary of the key characteristics of the key results within this group is

presented in Table 2. Armstrong (1994) study in the oil and gas sector emphasizes the importance of efficient health, safety, and environmental (HSE) spending to protect shareholder value, highlighting the need for robust risk management practices. Guo and Wang (2024) in the private sector demonstrates how shareholder focus on long-term value impacts workplace safety, with dedicated institutional investors influencing safety initiatives in treated firms. Conversely, Qian et al., (2023b) delve into stakeholder influence on short-termism and workplace safety, uncovering how short-selling pressure may compromise investments in employee training and safety. Gong et al., (2021) examine the impact of shareholder litigation threats on workplace safety, revealing that weakened litigation rights can lead to increased workplace injury rates, emphasizing the role of shareholder activism in maintaining safe workplaces.

Table 1: Summary of Studies on Shareholder focus and productivity

Author	Study aim	Research Method	Region	Sector/Industry	Key findings
(Fioridini and Molyneux, 2010)	Analyze shareholder value drivers in European banking systems.	Regression	France, Germany, Italy, and the United States	Banking sector	TFP changes best explain shareholder value variations in European banking.
(Denes et al., 2015)	To survey empirical research on shareholder activism over thirty years.	Literature review	United States	Corporate sector	Shareholder activism leads to specific governance changes in target firms.
(Greenan, 2014)	Investigate how increased shareholder governance impacts corporate culture and firm value.	Regression	Not mentioned	Corporate sector	Shareholder governance increases result-orientation but decreases customer-focus, integrity, and collaboration.
(Raverta and Guzmán, 2008)	To link productivity change and shareholder value in Spanish business sector.	Malmquist Total Factor Productivity Index	Spanish	Banking sector	Bank with higher efficiency and productivity changes have increased shareholder value.
(Boubaker, 2019)	Investigate impact of large controlling shareholders on firm productive efficiency.	Data Envelopment Analysis (DEA)	France	Manufacturing sector	Excess control rights of dominant owners negatively impact firm efficiency.
(Wangastakara and Mendis, 2021)	Explore relationship between Employee Productivity and Firm's Profitability from different perspectives.	Quantitative	Sri Lanka	Manufacturing and service sector	Significant relationship between Employee Productivity (EP) and Firm's Profitability (FP).
(Kumar and Chaudh, 2009)	Investigate productivity growth's impact on shareholders' wealth maximization.	Data Envelopment Analysis (DEA)	India	Food Industry	Study focused on productivity growth predicting shareholders' wealth maximization.
(Bai et al., 2023)	To compare database accuracy with other ownership datasets.	Common ownership linkage weights based on sales of other firms.	Not mentioned	Not mentioned	Institutional ownership positively impacts productivity.
(Sahu and Soltan, 2013)	Analyze foreign shareholding impact on productivity spillover.	Data Envelopment Analysis (DEA)	India	Manufacturing sector	Positive impact of labor and capital on output growth. Labor-intensive production in industries with low foreign firm presence.
(Xie et al., 2021)	Assess the impact of further privatization on shareholders on State-Owned Enterprises.	Olley and Pakes (OP) and Wooldridge (WD) estimation methods	China	Chinese state-owned enterprise	New private shareholders enhance SOEs' Total Factor Productivity significantly.
(Bai and Li, 2020)	Investigate the impact of stock liquidity on firm productivity.	Total factor productivity (TFP) as primary measure for efficiency.	China	Not mentioned	Stock liquidity positively impacts firm productivity, supported by strong association.
(Lomgopov and Tumirva, 2017)	Investigate determinants of dividend policy, firm size, and productivity on firm value.	Multiple regression	Indonesia	Manufacturing sector	Dividend policy has a negative impact on firm value.
(Lee et al., 2011)	Examine impact of Corporate Sustainability Performance on Tangible Business Performance.	Regression	U.S.A	Oil and gas industry	Pacific sustainability Index (PSI) and Research and Development (R&D) Intensity are major determinants of business performance.

According to Shi et al., (2021), shareholder activism may negatively impact employee health and safety. Cheng et al., (2023) examine how institutional block holders' geographic concentration affects workplace safety outcomes, suggesting that increasing investor influence may weaken safety measures. Additionally, Qian et al., (2023a) study on CEO regulatory focus underscores how CEOs' prioritization of shareholder concerns over safety may correlate with higher employee injury rates, emphasizing the psychological attributes' impact on workplace safety through resource allocation. These studies emphasize the complex relationship between shareholder focus and workplace safety, urging for a balanced approach that prioritizes both shareholder interests and employee well-being for sustainable organizational success.

Table 2: Summary of studies on Shareholder focus and safety performance

Author	Study aim	Research Method	Country/Region	Sector/Subject area	Key findings
(Armstrong, 1994)	To explore how oil and gas companies can enhance HSE performance.	Not mentioned	Not mentioned	Oil and gas	Risk management is crucial for effective HSE performance and cost-effectiveness.
(Guo and Wang, 2024)	Investigate the impact of board independence on workplace safety.	Not mentioned	Not mentioned	Private sector	Workplace safety improves as a result of board independence
(Qian et al., 2023b)	Investigate stakeholder influence on short-termism and workplace safety.	Interaction of moderation variables with	Not mentioned	Not mentioned	Short-selling pressure impacts workplace safety through stakeholder interdependencies.
Gong et al., 2021	Examine impact of shareholder litigation threat on workplace safety.	Regression	United States	General, workplace	Shareholder litigation threat increases workplace injury rates.
(Shi et al., 2021)	Investigate impact of institutional investor activism on employee health and safety.	Regression	Not mentioned	Not mentioned	Shareholder activism increases employee illness and injury rates significantly.
Cheng et al., 2022	Investigate influence of institutional blockholders' geographic concentration on workplace safety violations.	Regression	United States	Institutional investors	Blockholder geographic concentration leads to more workplace safety violations. Firms prioritize operational efficiency over employee investment with increased investor power.
(Qian et al., 2023a)	Investigate how CEO regulatory focus influences workplace safety and employee injuries	Multilevel modelling	United States	General, workplace	Prevention-focused CEOs have fewer employee injuries due to less aggressive workloads. CEO promotion focus correlates with higher employee injury rates.

Productivity and safety performance

The correlation between productivity and safety in the construction industry is a complex yet critical aspect of project management (Jia et al., 2019), as demonstrated by various studies conducted globally, which are summarized in Table 3. Zuluaga et

al., (2020) focused on evaluating fall protection systems for bridge work in the United States, stressing the interconnectedness of productivity and safety. The study found that an emphasis on productivity may compromise safety since workers may prioritize productivity above safety standards. In Canada, Hammad et al., (2012) explored real-time simulation and automated machine control to enhance productivity and safety, emphasizing the benefits of automation in reducing manual measurements and improving safety outcomes. Meanwhile, Abuhamra and Enshassi (2015) studied strategies in Palestine-Gaza strip, finding that factors such as planning, and communication positively impacted both safety and productivity. Additionally, Court et al., (2009) in the UK demonstrated how implementing Lean Construction Systems could improve productivity while reducing accidents on construction sites. However, Lamm and Massey (2007) in New Zealand highlighted the ongoing debate regarding the impact of safety interventions on productivity, calling for more empirical evidence in this area. Similarly, Etman et al., (2021) in Egypt found that while safety measures such as personal protective equipment were crucial for worker safety, productivity could be affected negatively by factors like compressed schedules and rework. Moreover, Lawani et al., (2019) in the UK emphasized the importance of integrating safety and operational management systems to improve productivity and safety in construction practices. These studies collectively underline the complicated relationship between productivity and safety in construction, advocating for a holistic approach that considers both aspects to achieve optimal project outcomes.

Table 3: Summary of Studies on Productivity and safety performance

Author	Study aim	Research Method	Country/Region	Sector/Subject area	Key findings
(Zuluaga, 2020)	evaluating four fall protection systems that are actively being considered for adoption based on the expected safety, efficiency, and productivity benefits they offer.	Questionnaire	United States	Construction industry	The adoption of fall protection system and raptor rail can yield substantial benefits in terms of safety, efficiency, and productivity, apart from reducing the risk of falls.
(Hammad et al., 2012)	Improve productivity and safety of heavy construction projects.	Case study	Canada	Construction projects	Proposed approach integrates multi-agent systems, real-time simulation, and automated machine control. Focus on improving productivity and safety in construction projects.
(AbuHamra and Enshassi, 2015)	To study the connection between Organization Health and Safety and increasing employee productivity.	Quantitative	Palestine-Gaza strip	Public construction	The study concluded that integration of safety management and productivity improvement are very important for achieving the strategies that developed by the company in the construction work.
(Court et al., 2009)	Develop and implement a Lean and agile Mechanical & Electrical Construction System. Improve project site operations safety and productivity in the UK construction	Case study	United Kingdom	Construction sector	Zero reportable accidents during the sample period.
(Lamm et al., 2007)	Investigate the link between Organization Health and Safety (OHS) interventions and firm performance/productivity.	Literature review	New Zealand	General: workplace	Research highlights the need for empirical evidence on OHS interventions.
(Etman et al., 2021)	Identify safety factors related to productivity in Egyptian construction industry.	Quantitative	Egypt	Construction industry	Skilled workers enhance safety, showing significant safety-productivity linkage. Rework reduces safety, unfair workload distribution affects productivity.
(Lawani et al., 2019)	Evaluate benefits of Off-Site Manufacturing timber kit through site trial using crane-erect.	Case study (Observations) and interviews	United Kingdom	Construction industry	Crane-erect requires adequate planning to avoid disruptions for other tradesmen.

DISCUSSION

Shareholder focus and its relationship with productivity and safety performance shed light on the complex dynamics that underpin corporate decision-making and organizational outcomes across various industries and geographical regions. These discussions reflect the multifaceted nature of shareholder influence on firms, encompassing financial performance, operational efficiency, employee welfare, and risk management. Starting with the examination of shareholder focus and productivity pursuit, it becomes evident that there is no one-size-fits-all approach. Shareholder focus centres on maximizing shareholder value, with management's primary responsibility being to improve profits and financial returns for shareholders (Denes et al., 2015).

However, shareholder focus does not exclusively prioritize productivity. Productivity is closely linked to operational efficiency and cost-effectiveness, directly impacting profitability—a critical metric that supports shareholder value (Wanigasekara and Mendis, 2021). Different studies highlighted contrasting effects based on factors such as industry, regulatory environment, ownership structure, and cultural context. For instance, while shareholder activism in the United States is shown to enhance firm

earnings and governance features, its impact on workplace safety might be detrimental, as highlighted by Shi et al., (2021). This could be attributed to a potential emphasis on cost-cutting measures or a lack of investment in safety protocols and training to maintain profitability (Baniassadi et al., 2018). Conversely, research by Wanigasekara and Mendis (2021) in Sri Lanka and Kumar and Charles (2009) in India suggests a positive correlation between employee productivity and firm profitability, highlighting the importance of human capital development for sustainable value creation. In these contexts, fostering a safe working environment becomes integral to nurturing a productive workforce, as safety concerns can directly impact employee well-being and productivity levels.

Furthermore, broader organizational dynamics beyond shareholder interests alone must be considered. Grennan et al., (2014) study of corporate culture dynamics underscores how an excessive focus on shareholder governance may compromise long-term success by neglecting customer-focus and collaboration, which can indirectly affect safety performance. Similarly, Boubaker et al., (2021) findings in the French manufacturing sector showed how excessive control rights of dominant owners can hinder firm productivity, potentially affecting safety practices and outcomes. In essence, achieving a balance between shareholder focus, productivity pursuit, and safety performance is crucial for sustainable business success. A holistic approach to governance that considers the interests of all stakeholders, including shareholders, employees, customers, and the broader community, is essential. This approach entails investing in both productivity-enhancing measures and robust safety protocols to ensure that financial success is not achieved at the expense of human well-being and organizational resilience.

Transitioning to the discussion on shareholder focus and safety performance, the studies provide insights into how shareholder priorities can influence organizational safety practices and outcomes. While shareholder pressure for short-term gains may lead to compromises in workplace safety, as suggested by Qian et al., (2023), dedicated institutional investors can positively impact safety initiatives, as demonstrated by Guo and Wang (2024). However, there is a delicate balance to strike between maximizing shareholder value and ensuring a safe work environment for employees, as evidenced by the findings on institutional investor activism potentially adversely affecting employee well-being (Shi et al., 2021) and CEO prioritization of shareholder concerns over safety correlating with higher injury rates (Qian et al., 2023). Although shareholders and employees often have conflicting interests in a firm, their interests in workplace safety are aligned to a large degree in the long term. Workplace injuries affect product cost, delivery, and quality (Brown et al., 2000). Such occurrences may also raise direct expenses to the organisation, such as hiring and training of replacement employees, government fines and sanctions legal fees and settlements for non-compliance (Qian et al., 2023). Insurance premium increases over time. Finally, unfavourable employee injury news damage organization reputation (Kabir et al., 2018).

To mitigate workplace injuries and consequences, organisations must prioritize safety alongside shareholder focus and productivity. Hence, while improving workplace safety requires significant capital investments and expenditures on training, monitoring, and preventive maintenance, these investments often benefit shareholders in the long term (Gong et al., 2021). Consistent with workplace safety having a positive impact on firm value, Cohn and Wardlaw (2016) found that a one-standard-deviation decrease in injury rate is associated with a 6.1% increase in firm value as

measured by Tobin's Q. Hence, it is crucial to pursue a balanced approach that acknowledges the interplay between decisions made to improve shareholder value and their potential implications for safety outcomes.

Furthermore, the findings on productivity and safety performance in the construction industry highlight the interconnectedness of these two factors and the importance of adopting integrated approaches to project management (Jia et al., 2019). Enhancing productivity is undeniably crucial for achieving project success and maximizing shareholder value (Boubaker et al., 2021). Projects must be completed efficiently, on time, and within budget to meet client expectations and maintain competitiveness (Neale and Gurmu, 2022). However, this should not be pursued at the expense of worker safety.

Prioritizing productivity over safety can lead to increased risks and hazards on construction sites, potentially resulting in severe consequences for workers and project outcomes (Oswald et al., 2018). Moreover, while maximizing shareholder value is undoubtedly a key objective for construction firms, it should not be pursued at the expense of ethical and moral obligations towards workers' safety (Hamdan et al., 2021). Recognising that a safe work environment is not only a legal requirement but also a moral imperative is essential for fostering a culture of safety within the industry. The study by Zuluaga et al., (2020) emphasize the risks associated with prioritizing productivity over safety, underscoring the need for comprehensive risk management strategies and investment in safety measures. Adopting integrated approaches to project management that balance shareholder focus, productivity pursuit with safety considerations is essential for sustainable project success.

Knowledge Gap and Future Directions

The synthesis of existing research offers valuable insights into how shareholder focus, productivity, and safety performance are interconnected and influence firm performance across diverse industries. Nonetheless, the systematic review has identified several gaps that warrant attention. Existing literature often examines shareholder focus, productivity, and safety as separate entities, overlooking their interconnectedness. Future research should aim to integrate these factors comprehensively to understand how decisions made to enhance shareholder value and productivity affect safety performance, and vice versa.

While studies have extensively explored these separate relationships in sectors such as banking, manufacturing, oil and gas, and private industries, there is a notable research gap within the construction industry. This presents an opportunity for future research to delve into how shareholder focus and productivity pursuit impact safety performance within construction firms. Also, while there is a significant contribution by countries in Oceania, North America, Asia and Europe, there is a deficiency in this area of research in Africa. This finding highlights the need for studies focused on the African context. Also, the findings from the study reveal limited empirical validation. Thus, future studies should conduct rigorous empirical research to validate these relationships across different industries and geographical regions. The study recommends intervention studies testing the effectiveness of strategies aimed at balancing shareholder focus, productivity, and safety performance. Lastly, the findings highlight conflicting interests between shareholders, employees, and other stakeholders regarding workplace safety. Future research should delve deeper into understanding these dynamics and identify strategies to reconcile conflicting interests while promoting a safe work environment.

CONCLUSIONS

The findings highlight the complex relationship between shareholder focus, productivity, and safety across industries, emphasizing the need for a balanced approach that aligns financial objectives with the well-being of workers. Understanding these dynamics is crucial for strategic decision-making to ensure long-term sustainability and value creation. The study identified gaps and set the tone for future studies such as integration of shareholder focus, productivity, and safety performance, context-specific analysis, empirical research, intervention studies and understanding stakeholder dynamics. This result provides insights for industry stakeholders to enhance safety performance while maintaining a focus on shareholder value and productivity. It calls for policymakers, practitioners, and stakeholders to formulate balanced strategies and policies when addressing the intricate interplay between financial objectives and safety in construction.

ACKNOWLEDGEMENTS

This research is funded by the Intra-Africa Mobility Scheme of the European Union in partnership with the African Union under the Africa Sustainable Infrastructure Mobility (ASIM) scheme. Opinions and conclusions are those of the authors and are not necessarily attributable to ASIM. The work is supported and part of collaborative research at the Centre of Applied Research and Innovation in the Built Environment (CARINBE).

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